

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2003-NE-36-AD; Amendment 39-13346; AD 2003-21-11]**

**RIN 2120-AA64**

### **Airworthiness Directives; Rolls-Royce plc RB211-524 Series Turbofan Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Rolls-Royce plc (RR) RB211-524 series turbofan engines. This AD requires replacing the dedicated generator rotor assembly, the adaptor casing on the high speed gearbox (HSGB), and bearings with new design parts on certain engines. This AD is prompted by several reports of dedicated generator rotor assembly bearing failures. We are issuing this AD to prevent possible uncommanded engine acceleration with no reaction to throttle movement, which could result in uncontrollable asymmetric engine thrust levels during takeoff or climb.

**DATES:** Effective November 10, 2003. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of November 10, 2003. We must receive any comments on this AD by December 23, 2003.

**ADDRESSES:** Use one of the following addresses to submit comments on this AD:

- By mail: The Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2003-NE-36-AD, 12 New England Executive Park, Burlington, MA 01803-5299.
- By fax: (781) 238-7055.
- By e-mail: 9-ane-adcomment@faa.gov.

You can get the service information referenced in this AD from Rolls-Royce plc, P.O. Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242424; fax: 011-44-1332-245418.

You may examine the AD docket, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA. You may examine the service information, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine And Propeller Directorate, 12 New England Executive Park; Burlington, MA 01803-5299; telephone (781) 238-7176; fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** The Civil Aviation Authority (CAA), which is the airworthiness authority for the United Kingdom (U.K.), recently notified the FAA that an unsafe condition may exist on certain RR RB211-524 series turbofan engines. The CAA advises that a number of dedicated generator rotor assembly bearing failures have occurred due to low fatigue life of the bearing material and inadequate bearing lubrication. Bearing failure can lead to an erratic high pressure (HP) shaft speed signal sent to the Full Authority Fuel Controller (FAFC). This erratic signal can cause possible uncommanded engine acceleration with no reaction to throttle movement, which could result in uncontrollable asymmetric engine thrust levels during takeoff or climb.

### **Relevant Service Information**

We have reviewed and approved the technical contents of RR Mandatory Service Bulletin (MSB) No. RB.211-72-E037, dated March 26, 2003, that describes procedures for replacing the dedicated generator adaptor casing, and the rotor assembly bearings with new design parts. The CAA classified RR MSB No. RB.211-72-E037 as mandatory and issued AD 004-03-2003, dated March 26, 2003, in order to ensure the airworthiness of these RR engines in the U.K.

### **FAA's Determination and Requirements of this AD**

Although no airplanes that are registered in the United States use these engines, the possibility exists that the engines could be used on airplanes that are registered in the United States in the future. The unsafe condition described previously is likely to exist or develop on other RB211-524 series turbofan engines. We are issuing this AD to prevent possible uncommanded engine acceleration with no reaction to throttle movement, which could result in uncontrollable asymmetric engine thrust levels during takeoff or climb.

This AD requires replacing the dedicated generator rotor assembly, part number (P/N) UL39102, the adaptor casing P/N UL26756 or UL26729, on the high speed gearbox (HSGB), and bearings P/N UL21029 with new design parts on the following:

- RB211-524G2-19, RB211-524G3-19, and RB211-H2-19 turbofan engines with SNs before SN 13793.
- RB211-524H-36 turbofan engines with SNs before SN 13472.
- All SN RB211-524G2-T-19 turbofan engines.
- All SN RB211-524G3-T-19 turbofan engines.
- All SN RB211-524H2-T-19 turbofan engines.
- All SN RB211-524H-T-36 turbofan engines.

The actions must be done within 62 months after the effective date of the AD for RB211-524G2-19, RB211-524G2-T-19, RB211-524G3-19, RB211-524G3-T-19, RB211-524H2-19, RB211-524H2-T-19 engines, and within 16 months after the effective date of the AD for SN RB211-524H-36, RB211-524H-T-36 engines. You must use the service information described previously to perform the actions required by this AD.

## **Bilateral Airworthiness Agreement**

This engine model is manufactured in the U.K. and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Under this bilateral airworthiness agreement, the CAA has kept the FAA informed of the situation described above. We have examined the findings of the CAA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

## **FAA's Determination of the Effective Date**

Since there are currently no domestic operators of this engine model, notice and opportunity for public comment before issuing this AD are unnecessary. Therefore, a situation exists that allows the immediate adoption of this regulation.

## **Changes to 14 CFR Part 39—Effect on the AD**

On July 10, 2002, we issued a new version of 14 CFR part 39 (67 FR 47998, July 22, 2002), which governs our AD system. This regulation now includes material that relates to special flight permits, alternative methods of compliance, and altered products. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

## **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. 2003-NE-36-AD" in the subject line of your comments. If you want us to acknowledge receipt of your mailed comments, send us a self-addressed, stamped postcard with the docket number written on it; we will date-stamp your postcard and mail it back to you. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it. If a person contacts us verbally, and that contact relates to a substantive part of this AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We are reviewing the writing style we currently use in regulatory documents. We are interested in your comments on whether the style of this document is clear, and your suggestions to improve the clarity of our communications with you. You may get more information about plain language at <http://www.faa.gov/language> and <http://www.plainlanguage.gov>.

## **Examining the AD Docket**

You may examine the AD Docket (including any comments and service information), by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. See ADDRESSES for the location.

## **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2003-NE-36-AD" in your request.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2003-21-11 Rolls-Royce plc:** Amendment 39-13346. Docket No. 2003-NE-36-AD.

## Effective Date

(a) This airworthiness directive (AD) becomes effective November 10, 2003.

## Affected ADs

(b) None.

## Applicability

(c) This AD applies to the Rolls-Royce plc (RR) engines in the following Table 1, with the dedicated generator rotor assembly, part number (P/N) UL39102, adaptor casing P/N UL26756 or UL26729, on the high speed gearbox (HSGB), and bearings P/N UL21029 installed.

**TABLE 1.—AFFECTED ENGINES AND COMPLIANCE TIMES**

Engine model	Engine serial numbers	Comply after the effective date of this AD
RB211-524G2-19	Before SN 13793	Within 62 months.
RB211-524G2-T-19	All SNs	Within 62 months.
RB211-524G3-19	Before SN 13793	Within 62 months.
RB211-524G3-T-19	All SNs	Within 62 months.
RB211-524H2-19	Before SN 13793	Within 62 months.
RB211-524H2-T-19	All SNs	Within 62 months.
RB211-524H-36	Before SN 13472	Within 16 months.
RB211-524H-T-36	All SNs	Within 16 months.

These engines are installed on, but not limited to, Boeing 747 and 767 series airplanes.

## Unsafe Condition

(d) This AD is prompted by several reports of dedicated generator rotor assembly bearing failures. We are issuing this AD to prevent possible uncommanded engine acceleration with no reaction to throttle movement, which could result in uncontrollable asymmetric engine thrust levels during takeoff or climb.

## **Compliance**

(e) You are responsible for having the actions required by this AD performed within the compliance times specified in Table 1 of this AD, unless the actions have already been done.

### **Removal and Installation of Adaptor Gearbox and Dedicated Generator On Engines In-Service**

(f) For engines in-service, do the following:

(1) Remove the adaptor gearbox and the dedicated generator. Follow paragraph 3.C. of the Accomplishment Instructions of RR Mandatory Service Bulletin (MSB) No. RB.211-72-E037, dated March 26, 2003.

(2) Install the adaptor gearbox and the dedicated generator onto the engine. Follow paragraph 3.I. of the Accomplishment Instructions of RR MSB No. RB.211-72-E037, dated March 26, 2003.

### **Removal, Disassembly, Rework, Assembly, and Installation of Adaptor Gearbox and Dedicated Generator On Engines At Overhaul**

(g) For engines at overhaul, do the following:

(1) Remove the adaptor gearbox and the dedicated generator. Follow paragraph 3.D. of the Accomplishment Instructions of RR MSB No. RB.211-72-E037, dated March 26, 2003.

(2) Disassemble the adaptor gearbox. Follow paragraph 3.E. of the Accomplishment Instructions of RR MSB No. RB.211-72-E037, dated March 26, 2003.

(3) Rework the existing gearbox adaptor casing assemblies (P/N UL26756 or P/N UL26729). Follow paragraph 3.F. of the Accomplishment Instructions of RR MSB No. RB.211-72-E037, dated March 26, 2003.

(4) Assemble the adaptor gearbox. Follow paragraph 3.H. of the Accomplishment Instructions of RR MSB No. RB.211-72-E037, dated March 26, 2003.

(5) Install the adaptor gearbox and the dedicated generator onto the engine. Follow paragraph 3.J. of the Accomplishment Instructions of RR MSB No. RB.211-72-E037, dated March 26, 2003.

### **Alternative Methods of Compliance**

(h) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

### **Material Incorporated by Reference**

(i) You must use Rolls-Royce plc Mandatory Service Bulletin No. RB.211-72-E037, dated March 26, 2003, to perform the inspections required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Rolls-Royce plc, PO Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242424; fax: 011-44-1332-245-418. You may review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

## **Related Information**

(j) CAA airworthiness directive 004-03-2003, dated March 26, 2003, also addresses the subject of this AD.

Issued in Burlington, Massachusetts, on October 15, 2003.

Robert G. Mann,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 03-26470 Filed 10-23-03; 8:45 am]

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